

What is claimed is:

1. An anti-glare film comprising an anti-glare layer, and a resin layer having a low refraction index  
5 formed on at least one side of the anti-glare layer, wherein the anti-glare layer has an uneven surface structure, and the anti-glare film isotropically transmits and scatters an incident light to show the maximum value of the scattered light intensity at a scattering angle of  $0.1$  to  $10^\circ$ , and  
10 has a total light transmittance of 70 to 100%.

2. An anti-glare film according to claim 1, which has a visibility of a transmitted image of 70 to 100% measured by an image clarity measuring apparatus provided with an optical slit of 0.5 mm width, and has a haze of  
15 10 to 60%.

3. An anti-glare film according to claim 1, which isotropically transmits and scatters an incident light to show the maximum value of the scattered light intensity at a scattering angle of  $1$  to  $10^\circ$ , and has a total light  
20 transmittance of 80 to 100%.

4. An anti-glare film according to claim 1, wherein the anti-glare layer comprises at least one polymer and at least one curable resin precursor, at least two components selected from the group consisting of the  
25 polymers and the precursors are phase-separated by spinodal decomposition from a liquid phase, and the precursor is cured.

5. An anti-glare film according to claim 4,  
wherein (i) a plurality of polymers, (ii) a combination  
of a polymer and a curable resin precursor, or (iii) a  
plurality of curable resin precursors is phase-separated  
5 by spinodal decomposition.

6. An anti-glare film according to claim 4,  
wherein the polymer comprises a plurality of polymers being  
phase-separable each other by spinodal decomposition, and  
the curable resin precursor is compatible with at least  
10 one polymer of the plurality of polymers.

7. An anti-glare film according to claim 6,  
wherein at least one polymer of the plurality of polymers  
has a functional group participating in a curing reaction  
of the curable resin precursor.

15 8. An anti-glare film according to claim 6,  
wherein at least one polymer of the plurality of polymers  
has a (meth)acryloyl group.

9. An anti-glare film according to claim 7,  
wherein the plurality of polymers phase-separated by  
20 spinodal decomposition comprise a cellulose derivative and  
at least one resin selected from the group consisting of  
a styrenic resin; a (meth)acrylic resin, an alicyclic  
olefinic resin, a polycarbonate-series resin, and a  
polyester-series resin; and at least one polymer of the  
25 polymers has a polymerizable group.

10. An anti-glare film according to claim 4,  
wherein the curable resin precursor comprises at least one

member selected from the group consisting of an epoxy  
(meth)acrylate, a urethane (meth)acrylate, a polyester  
(meth)acrylate, a silicone (meth)acrylate, and a  
polyfunctional monomer having at least two polymerizable  
5 unsaturated bonds.

11. An anti-glare film according to claim 4,  
wherein abrasion resistance is imparted to the anti-glare  
layer by the cured resin.

12. An anti-glare film according to claim 4,  
10 wherein the anti-glare layer has a regular or periodical  
phase-separation structure fixed by the cured resin.

13. An anti-glare film according to claim 1,  
wherein the anti-glare layer is cured with at least one  
curing means selected from the group consisting of an  
15 actinic ray and a thermal source.

14. An anti-glare film according to claim 1,  
wherein the anti-glare layer comprises a polymer and a cured  
resin, and the weight ratio of the former relative to the  
latter is 5/95 to 60/40.

20 15. An anti-glare film according to claim 1,  
wherein the resin layer comprises a resin having a  
refraction index of 1.36 to 1.49.

16. An anti-glare film according to claim 1,  
wherein the resin layer comprises a fluorine-containing  
25 compound.

17. An anti-glare film according to claim 1,  
wherein the resin layer comprises a curable fluorine-

containing resin precursor, and the precursor is cured with at least one curing means selected from the group consisting of an actinic ray and a thermal source.

18. An anti-glare film according to claim 1,  
5 wherein the anti-glare layer and the resin layer are formed on a transparent support in this order.

19. An anti-glare film according to claim 18,  
wherein the transparent support comprises a transparent polymer film for forming an optical member.

10 20. An anti-glare film according to claim 1, which is used for at least one display device or apparatus selected from the group consisting of a liquid crystal display device or apparatus, a plasma display and a touch panel-equipped input device.

15 21. A process for producing an anti-glare film, which comprises

forming a phase separation structure by spinodal decomposition from a liquid phase with evaporating a solvent, wherein the liquid phase contains at least one  
20 polymer, at least one curable resin precursor, and the solvent,

curing the resin precursor to form an anti-glare layer, and

forming a resin layer having a low refraction index  
25 on at least one side of the anti-glare layer.

22. A process according to claim 21, which comprises phase-separating (i) a plurality of polymers,

(ii) a combination of a polymer and a curable resin precursor, or (iii) a plurality of curable resin precursors.

23. A process according to claim 21, which  
5 comprises phase-separating a composition composed of a thermoplastic resin, a photo-curable compound, a photopolymerization initiator, and a solvent for dissolving the thermoplastic resin and the photo-curable compound; and curing the resin precursor by a light  
10 irradiation.

24. A process according to claim 21, which  
comprises phase-separating a composition composed of a thermoplastic resin, a resin being incompatible with the thermoplastic resin and having a photo-curable group, a  
15 photo-curable compound, a photopolymerization initiator, and a solvent for dissolving the resin and the photo-curable compound; and curing the resin precursor by a light irradiation.

25. A process according to claim 21, wherein at  
20 least one anti-glare layer is formed on a transparent support, and the resin layer is formed on the anti-glare layer.

26. An optical member in which a film recited in  
claim 1 is laminated on at least one side of a polarizing  
25 plate.